Appl. No. 10/662,109
Response dated 03/03/06
Reply to Office Action of 11/03/05

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

1. (currently amended) A modified, mesophase pitch-based carbon fiber comprising from about ~~0.01~~ 0.05 percent to about 1.0 percent by weight of carbon nanomaterial reinforcements.

2. (original) The modified carbon fiber set forth in claim 1 comprising from about 0.1 percent to about 0.5 percent by weight of carbon nanomaterial reinforcements.

3. (original) The modified carbon fiber set forth in claim 1 wherein the carbon nanomaterial reinforcements comprise carbon nanotubes.

4. (original) The modified carbon fiber set forth in claim 3 wherein the carbon nanotubes comprise multi-wall carbon nanotubes.

5. (original) The modified carbon fiber set forth in claim 1 comprising decreased tensile modulus.

6. (withdrawn) A method for making a modified, mesophase pitch-based carbon fiber comprising the steps of:

a. providing an anisotropic mesophase pitch;

b. heating the pitch to at least the softening temperature of the pitch;

c. dispersing carbon nanomaterials in the heated pitch in an amount ranging from about 0.01 percent to about 1.0 percent by weight;

d. heating the pitch to an extrusion temperature of about 20° to about 30°C above the softening point;

e. melt spinning a carbon nanomaterial-reinforced pitch fiber;

f. thermosetting the spun fiber; and

g. pyrolyzing the carbon nanomaterial-reinforced pitch fiber to form a carbon nanomaterial-reinforced pitch-based carbon fiber .

7. (withdrawn) The method set forth in claim 6 comprising dispersing carbon nanomaterials in the heated pitch in an amount ranging from about 0.1 percent to about 0.5 percent by weight.

8. (withdrawn) The method set forth in claim 6 wherein the carbon nanomaterials comprise carbon nanotubes.

9. (withdrawn) The method set forth in claim 8 wherein the carbon nanotubes comprise multi-wall carbon nanotubes.